

100	105	110	2
agc tta ggt gcc atg ggc aag agc cct ctg aac caa gga gac tca tca Ser Leu Gly Ala Met Gly Lys Ser Pro Leu Asn Gln Gly Asp Ser Ser	115	120	384
125			
aca ccc aac ctg ccc aaa cag gca gcc agc acc tct ggg ccc act ccc Thr Pro Asn Leu Pro Lys Gln Ala Ala Ser Thr Ser Gly Pro Thr Pro	130	135	432
140			
cct gcc tcc caa gca ctg aat cca caa gca caa aag caa gta ggg ctg Pro Ala Ser Gln Ala Leu Asn Pro Gln Ala Gln Lys Gln Val Gly Leu	145	150	480
155	160		
gtg acc agt agt cct gcc aca tca cag act gga cct ggg atc tgc atg Val Thr Ser Ser Pro Ala Thr Ser Gln Thr Gly Pro Gly Ile Cys Met	165	170	528
175			
aat gct aac ttc aac cag acc cac cca ggc ctt ctc aat agt aac tct Asn Ala Asn Phe Asn Gln Thr His Pro Gly Leu Leu Asn Ser Asn Ser	180	185	576
190			
ggc cat agc tta atg aat cag gct caa caa ggg caa gct caa gtc atg Gly His Ser Leu Met Asn Gln Ala Gln Gln Ala Gln Val Met	195	200	624
205			
aat gga tct ctt ggg gct gct gga aga gga agg gga gct gga atg ccc Asn Gly Ser Leu Gly Ala Ala Gly Arg Gly Arg Gly Ala Gly Met Pro	210	215	672
220			
tac cct gct cca gcc atg cag ggg gcc aca agc agt gtg ctg gcg gag Tyr Pro Ala Pro Ala Met Gln Gly Ala Thr Ser Ser Val Leu Ala Glu	225	230	720
240			
acc ttg aca cag gtt tcc cca caa atg gct ggc cat gct gga cta aat Thr Leu Thr Gln Val Ser Pro Gln Met Ala Gly His Ala Gly Leu Asn	245	250	768
255			
aca gca cag gca gga ggc atg acc aag atg gga atg act ggt acc aca Thr Ala Gln Ala Gly Gly Met Thr Lys Met Gly Met Thr Gly Thr Thr	260	265	816
270			
agt cca ttt gga caa ccc ttt agt caa act gga ggg cag cag atg gga Ser Pro Phe Gly Gln Pro Phe Ser Gln Thr Gly Gly Gln Gln Met Gly	275	280	864
285			
gcc act gga gtg aac ccc cag tta gcc agc aaa cag agc atg gtc aat Ala Thr Gly Val Asn Pro Gln Leu Ala Ser Lys Gln Ser Met Val Asn	290	295	912
300			
agt tta cct gct ttt cct aca gat atc aag aat act tca gtc acc act Ser Leu Pro Ala Phe Pro Thr Asp Ile Lys Asn Thr Ser Val Thr Thr	305	310	960
320			
gtg cca aat atg tcc cag ttg caa aca tca gtg gga att gta ccc aca Val Pro Asn Met Ser Gln Leu Gln Thr Ser Val Gly Ile Val Pro Thr	325	330	1008
335			
caa gca att gca aca ggc ccc aca gca gac cct gaa aaa cgc aaa ctg Gln Ala Ile Ala Thr Gly Pro Thr Ala Asp Pro Glu Lys Arg Lys Leu			1056

3

340	345	350	
ata cag cag cag ctg gtt cta ctg ctt cat gcc cac aaa tgt cag aga Ile Gln Gln Gln Leu Val Leu Leu Leu His Ala His Lys Cys Gln Arg 355	360	365	1104
cga gag caa gca aat gga gag gtt cgm gcc tgc tct ctc cca cac tgt Arg Glu Gln Ala Asn Gly Glu Val Xaa Ala Cys Ser Leu Pro His Cys 370	375	380	1152
cga acc atg aaa aac gtt ttg aat cac atg aca cat tgt cag gct ccc Arg Thr Met Lys Asn Val Leu Asn His Met Thr His Cys Gln Ala Pro 385	390	395	1200
aaa gcc tgc caa gtt gcc cat tgt gca tct tca cga caa atc atc tct Lys Ala Cys Gln Val Ala His Cys Ala Ser Ser Arg Gln Ile Ile Ser 405	410	415	1248
cat tgg aag aac tgc aca cga cat gac tgt cct gtt tgc ctc cct ttg His Trp Lys Asn Cys Thr Arg His Asp Cys Pro Val Cys Leu Pro Leu 420	425	430	1296
aaa aat gcc agt gac aag cga aac caa caa acc atc ctg gga tct cca Lys Asn Ala Ser Asp Lys Arg Asn Gln Gln Thr Ile Leu Gly Ser Pro 435	440	445	1344
gct agt gga att caa aac aca att ggt tct gtt ggt gca ggg caa cag Ala Ser Gly Ile Gln Asn Thr Ile Gly Ser Val Gly Ala Gly Gln Gln 450	455	460	1392
aat gcc act tcc tta agt aac cca aat ccc ata gac ccc agt tcc atg Asn Ala Thr Ser Leu Ser Asn Pro Asn Pro Ile Asp Pro Ser Ser Met 465	470	475	1440
cag cgg gcc tat gct cta gga ctc ccc tac atg aac cag cct cag Gln Arg Ala Tyr Ala Ala Leu Gly Leu Pro Tyr Met Asn Gln Pro Gln 485	490	495	1488
acg cag ctg cag cct cag gtt cct ggc cag caa cca gca cag cct cca Thr Gln Leu Gln Pro Gln Val Pro Gly Gln Gln Pro Ala Gln Pro Pro 500	505	510	1536
gcc cac cag cag atg agg act ctc aat gcc cta gga aac aao ccc atg Ala His Gln Gln Met Arg Thr Ile Asn Ala Leu Gly Asn Asn Pro Met 515	520	525	1584
agt gtc cca gca gga gga ata aca aca gat caa cag cca cca aac ttg Ser Val Pro Ala Gly Gly Ile Thr Thr Asp Gln Gln Pro Pro Asn Leu 530	535	540	1632
att tca gaa tca gct ctt cca act tcc ttg ggg gct acc aat cca ctg Ile Ser Glu Ser Ala Leu Pro Thr Ser Leu Gly Ala Thr Asn Pro Leu 545	550	555	1680
atg aat gat ggt tca aac tct ggt aac att gga agc ctc agc agc ata Met Asn Asp Gly Ser Asn Ser Gly Asn Ile Gly Ser Leu Ser Thr Ile 565	570	575	1728
cct aca gca gcg cct cct tcc agc act ggt gtt cga aaa ggc tgg cat Pro Thr Ala Ala Pro Pro Ser Ser Thr Gly Val Arg Lys Gly Trp His			1776

4

580	585	590	
gaa cat gtg act cag gac cta cgg agt cat cta gtc cat aaa ctc gtt Glu His Val Thr Gln Asp Leu Arg Ser His Leu Val His Lys Leu Val 595	600	605	1824
caa gcc atc ttc cca act cca gac cct gca gct ctg aaa gat cgc cgc Gln Ala Ile Phe Pro Thr Pro Asp Pro Ala Ala Leu Lys Asp Arg Arg 610	615	620	1872
atg gag aac ctg gtt gcc tat gct aag aaa gtg gag gga gac atg tat Met Glu Asn Leu Val Ala Tyr Ala Lys Lys Val Glu Gly Asp Met Tyr 625	630	635	1920
gag tct gct aat agc egg gat gaa tac tat cat tta tta gca gag aaa Glu Ser Ala Asn Ser Arg Asp Glu Tyr Tyr His Leu Leu Ala Glu Lys 645	650	655	1968
atc tat aaa ata caa aaa gaa cta gaa gaa aag cgg agg aca cgt tta Ile Tyr Lys Ile Gln Lys Glu Leu Glu Glu Lys Arg Arg Thr Arg Leu 660	665	670	2016
cat aag caa ggc atc ctg ggt aac cag cca gct tta cca gct tct ggg His Lys Gln Gly Ile Leu Gly Asn Gln Pro Ala Leu Pro Ala Ser Gly 675	680	685	2064
gct cag ccc cct gtg att cca cca gcc cag tct gta aga cct cca aat Ala Gln Pro Pro Val Ile Pro Pro Ala Gln Ser Val Arg Pro Pro Asn 690	695	700	2112
ggg ccc ctg cct ttg cca gtg aat cgc atg cag gtt tct caa ggg atg Gly Pro Leu Pro Leu Pro Val Asn Arg Met Gln Val Ser Gln Gly Met 705	710	715	2160
aat tca ttt aac cca atg tcc ctg gga aac gtc cag ttg cca cag gca Asn Ser Phe Asn Pro Met Ser Leu Gly Asn Val Gln Leu Pro Gln Ala 725	730	735	2208
ccc atg gga cct cgt gca gca tcc cct atg aac cac tct gtg cag atg Pro Met Gly Pro Arg Ala Ala Ser Pro Met Asn His Ser Val Gln Met 740	745	750	2256
aac agc atg gcc tca gtt ccg ggt atg gcc att tct cct tca cgg atg Asn Ser Met Ala Ser Val Pro Gly Met Ala Ile Ser Pro Ser Arg Met 755	760	765	2304
cct cag cct cca aat atg atg ggc act cat gcc aac aac att atg gcc Pro Gln Pro Pro Asn Met Met Gly Thr His Ala Asn Asn Ile Met Ala 770	775	780	2352
cag gca cct act cag aac cag ttt ctg cca cag aac cag ttt cca tca Gln Ala Pro Thr Gln Asn Gln Phe Leu Pro Gln Asn Gln Phe Pro Ser 785	790	795	2400
tcc agt ggg gca atg agt gtg aac agt gtg ggc atg ggg caa cca gca Ser Ser Gly Ala Met Ser Val Asn Ser Val Gly Met Gly Gln Pro Ala 805	810	815	2448
gcc cag gca ggt gtt tca cag ggt cag gaa cct gga gct gct ctc ctc Ala Gln Ala Gly Val Ser Gln Gly Gln Pro Gly Ala Ala Leu Pro			2496

820	825	830	
5			
aac cct ctg aac atg ctg gca ccc cag gcc agc cag ctg cct tgc cca Asn Pro Leu Asn Met Leu Ala Pro Gln Ala Ser Gln Leu Pro Cys Pro 835	840	845	2544
cca gtg aca cag tca cca ttg cac ccg act cca cct cct gct tcc aca Pro Val Thr Gln Ser Pro Leu His Pro Thr Pro Pro Ala Ser Thr 850	855	860	2592
gct gct ggc atg ccc tct ctc caa cat cca acg gca cca gga atg acc Ala Ala Gly Met Pro Ser Leu Gln His Pro Thr Ala Pro Gly Met Thr 865	870	875	2640
cct cct cag cca gca gct ccc act cag cca tct act cct gtg tca tct Pro Pro Gln Pro Ala Ala Pro Thr Gln Pro Ser Thr Pro Val Ser Ser 885	890	895	2688
ggg cag act cct acc cca act cct ggc tca gtg ccc agc gct gcc caa Gly Gln Thr Pro Thr Pro Gly Ser Val Pro Ser Ala Ala Gln 900	905	910	2736
aca cag agt acc cct aca gtc cag gca gca cag gct cag gtg act Thr Gln Ser Thr Pro Thr Val Gln Ala Ala Ala Gln Ala Gln Val Thr 915	920	925	2784
cca cag cct cag acc cca gtg cag cca cca tct gtg gct act cct cag Pro Gln Pro Gln Thr Pro Val Gln Pro Pro Ser Val Ala Thr Pro Gln 930	935	940	2832
tca tca cag cag caa cca acg cct gtg cat act cag cca cct ggc aca Ser Ser Gln Gln Pro Thr Pro Val His Thr Gln Pro Pro Gly Thr 945	950	955	2880
ccg ctt tct cag gca gca gcc agc att gat aat aga gtc cct act ccc Pro Leu Ser Gln Ala Ala Ser Ile Asp Asn Arg Val Pro Thr Pro 965	970	975	2928
tcc act gtg acc agt gct gaa acc agt tcc cag cag cca gga ccc gat Ser Thr Val Thr Ser Ala Glu Thr Ser Ser Gln Gln Pro Gly Pro Asp 980	985	990	2976
gtg ccc atg ctg gaa atg aag aca gag gtg cag aca gat gat gct gag Val Pro Met Leu Glu Met Lys Thr Glu Val Gln Thr Asp Asp Ala Glu 995	1000	1005	3024
cct gaa cct act gaa tcc aag ggg gaa cct cgg tct gag atg atg gaa Pro Glu Pro Thr Glu Ser Lys Gly Glu Pro Arg Ser Glu Met Met Glu 1010	1015	1020	3072
gag gat tta oaa ggt tct tcc caa gta aaa gaa gag aca gat acg aca Glu Asp Leu Gln Gly Ser Ser Gln Val Lys Glu Glu Thr Asp Thr Thr 1025	1030	1035	3120
gag cag aag tca gag cca atg gaa gta gaa gaa aag aaa cct gaa gta Glu Gln Lys Ser Glu Pro Met Glu Val Glu Glu Lys Lys Pro Glu Val 1045	1050	1055	3168
aaa gtg gaa gct aaa gag gaa gaa gag aac agt tcc aac gac aca gcc Lys Val Glu Ala Lys Glu Glu Glu Asn Ser Asn Asp Thr Ala			3216

1060	1065	1070	
6			
tca caa tca aca tct cct tcc cag cca cgc aaa aaa atc ttt aaa ccc Ser Gln Ser Thr Ser Pro Ser Gln Pro Arg Lys Lys Ile Phe Lys Pro 1075	1080	1085	3264
gag gag cta cgc cag gca ctt atg cca act cta gaa gca ctc tat cga Glu Glu Leu Arg Gln Ala Leu Met Pro Thr Leu Glu Ala Leu Tyr Arg 1090	1095	1100	3312
cag gac cca gag tct ttg cct ttt cgt cag cct gta gat cct cag ctc Gln Asp Pro Glu Ser Leu Pro Phe Arg Gln Pro Val Asp Pro Gln Leu 1110	1115	1120	3360
cta gga atc cca gat tat ttt gat ata gtc aag aat cct atg gac ctt Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val Lys Asn Pro Met Asp Leu 1125	1130	1135	3408
tct acc atc aaa cga aag ctg gac aca ggg caa tat caa gaa ccc tgg Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly Gln Tyr Gln Glu Pro Trp 1140	1145	1150	3456
cag tat gtc gat gat gtc agg ctt atg ttc aac aat gcg tgg cta tat Gln Tyr Val Asp Asp Val Arg Leu Met Phe Asn Asn Ala Trp Leu Tyr 1155	1160	1165	3504
aat cgt aaa acg tcc cgt gta tat aaa ttt tgc agt aaa ctt gca gag Asn Arg Lys Thr Ser Arg Val Tyr Lys Phe Cys Ser Lys Leu Ala Glu 1170	1175	1180	3552
gtc ttt gaa caa gaa att gac cct gtc atg cag tct ctt gga tat tgc Val Phe Glu Gln Glu Ile Asp Pro Val Met Gln Ser Leu Gly Tyr Cys 1185	1190	1195	3600
tgt gga cga aag tat gag ttc tcc cca cag act ttg tgc tgt tac gga Cys Gly Arg Lys Tyr Glu Phe Ser Pro Gln Thr Leu Cys Cys Tyr Gly 1205	1210	1215	3648
aag cag ctg tgt aca att cct cgt gat gca gcc tac tac agc tat cag Lys Gln Leu Cys Thr Ile Pro Arg Asp Ala Ala Tyr Tyr Ser Tyr Gln 1220	1225	1230	3696
aat agg tat cat ttc tgt ggg aag tgt ttc aca gag atc cag ggc gag Asn Arg Tyr His Phe Cys Gly Lys Cys Phe Thr Glu Ile Gln Gly Glu 1235	1240	1245	3744
aat gtg acc ctg ggt gac gac cct tcc caa cct cag acg aca att tcc Asn Val Thr Leu Gly Asp Asp Pro Ser Gln Pro Gln Thr Thr Ile Ser 1250	1255	1260	3792
aag gat caa ttt gaa aag aag aaa aat gat acc tta gat cct gaa cct Lys Asp Gln Phe Glu Lys Lys Asn Asp Thr Leu Asp Pro Glu Pro 1265	1270	1275	3840
ttt gtt gac tgc aaa gag tgt ggc egg aag atg cat cag att tgt gtt Phe Val Asp Cys Lys Glu Cys Gly Arg Lys Met His Gln Ile Cys Val 1285	1290	1295	3888
cta cac tat gac atc att tgg cct tca ggt ttt gtg tgt gac aac tgt Leu His Tyr Asp Ile Ile Trp Pro Ser Gly Phe Val Cys Asp Asn Cys			3936

7

1300	1305	1310	
ttg aag aaa act ggc aga cct cgg aaa gaa aac aaa ttc agt gct aag Leu Lys Lys Thr Gly Arg Pro Arg Lys Glu Asn Lys Phe Ser Ala Lys 1315	1320	1325	3984
agg ctg cag acc aca cga ttg gga aac cac tta gaa gac aga gtg aat Arg Leu Gln Thr Thr Arg Leu Gly Asn His Leu Glu Asp Arg Val Asn 1330	1335	1340	4032
aag ttt ttg cgg cgc cag aat cac cct gaa gct ggg gag gtt ttt gtc Lys Phe Leu Arg Arg Gln Asn His Pro Glu Ala Gly Glu Val Phe Val 1345	1350	1355	4080
aga gtg gtg gcc agc tca gac aag act gtg gag gtc aag ccc gga atg Arg Val Val Ala Ser Ser Asp Lys Thr Val Glu Val Lys Pro Gly Met 1365	1370	1375	4128
aag tca agg ttt gtg gat tct gga gag atg tgg gaa tct ttc cca tat Lys Ser Arg Phe Val Asp Ser Gly Glu Met Ser Glu Ser Phe Pro Tyr 1380	1385	1390	4176
cgt acc aaa gca ctc ttt gct ttt gag gag atc gat gga gtc gat gtg Arg Thr Lys Ala Leu Phe Ala Phe Glu Glu Ile Asp Gly Val Asp Val 1395	1400	1405	4224
tgc ttt ttt ggg atg cat gtg caa gat acg gct ctg att gcc ccc cac Cys Phe Phe Gly Met His Val Gln Asp Thr Ala Leu Ile Ala Pro His 1410	1415	1420	4272
caa ata caa ggc tgg gta tac ata tct tat ctg gac agt att cat ttc Gln Ile Gln Gly Cys Val Tyr Ile Ser Tyr Leu Asp Ser Ile His Phe 1425	1430	1435	4320
tta cgg ccc cgc tgc ctc cgg aca gct gtt tac cat gag atc ctc atc Phe Arg Pro Arg Cys Leu Arg Thr Ala Val Tyr His Glu Ile Leu Ile 1445	1450	1455	4368
gga tat ctc gag tat gtg aag aaa ttg gtg tat gtg aca gca cat att Gly Tyr Leu Glu Tyr Val Lys Lys Leu Val Tyr Val Thr Ala His Ile 1460	1465	1470	4416
tgg gcc tgt ccc cca agt gaa gga gat gac tat atc ttt cat tgc cac Trp Ala Cys Pro Pro Ser Glu Gly Asp Asp Tyr Ile Phe His Cys His 1475	1480	1485	4464
ccc cct gac cag aaa atc ccc aaa cca aaa cga cta cag gag tgg tac Pro Pro Asp Gln Lys Ile Pro Lys Pro Lys Arg Leu Gln Glu Trp Tyr 1490	1495	1500	4512
aag aag atg ctg gac aag gcg ttt gca gag agg atc att aac gac tat Lys Lys Met Leu Asp Lys Ala Phe Ala Glu Arg Ile Ile Asn Asp Tyr 1505	1510	1515	4560
aag gac atc ttc aaa cca gcg aac gaa gac agg ctc acg agt gcc aag Lys Asp Ile Phe Lys Gln Ala Asn Glu Asp Arg Leu Thr Ser Ala Lys 1525	1530	1535	4608
gag ttg ccc tat ttt gaa gga gat ttc tgg cct aat gtg ttg gaa gaa Glu Leu Pro Tyr Phe Glu Gly Asp Phe Trp Pro Asn Val Leu Glu Glu 1550			4656

1540	1545	1550	8
agc att aag gaa cta gaa caa gaa gaa gaa agg aaa aaa gaa gag Ser Ile Lys Glu Leu Glu Gln Glu Glu Glu Arg Lys Lys Glu Glu 1555	1560	1565	
agt act gca gcg agt gag act cct gag ggc agt cag ggt gac agc aaa Ser Thr Ala Ala Ser Glu Thr Pro Glu Gly Ser Gln Gly Asp Ser Lys 1570	1575	1580	4704
aat gcg aag aaa aag aac aac aag aag acc aac aaa aac aaa agc agc Asn Ala Lys Lys Asn Asn Lys Lys Thr Asn Lys Asn Lys Ser Ser 1585	1590	1595	4752
att agc cgc gcc aac aag aag ccc agc atg ccc aat gtt tcc aac Ile Ser Arg Ala Asn Lys Lys Pro Ser Met Pro Asn Val Ser Asn 1605	1610	1615	4800
gac ctg tgg cag aag ctg tat gcc acc atg gag aag cac aag gag gta Asp Leu Ser Gln Lys Leu Tyr Ala Thr Met Glu Lys His Lys Glu Val 1620	1625	1630	4848
ttc ttt gtg att cat ctg cat gct ggg cct gtt atc agc act cag ccc Phe Phe Val Ile His Leu His Ala Gly Pro Val Ile Ser Thr Gln Pro 1635	1640	1645	4896
ccc atc gtg gac cct gat cct ctg ctt agc tgt gac ctc atg gat ggg Pro Ile Val Asp Pro Asp Pro Leu Leu Ser Cys Asp Leu Met Asp Gly 1650	1655	1660	4944
cga gat gcc ttc ctc acc ctg gcc aga gac aag cac tgg gaa ttc tct Arg Asp Ala Phe Leu Thr Leu Ala Arg Asp Lys His Trp Glu Phe Ser 1665	1670	1675	5040
tcc tta cgc cgc tcc aaa tgg tcc act ctg tgc atg ctg gtg gag ctg Ser Leu Arg Arg Ser Lys Trp Ser Thr Leu Cys Met Leu Val Glu Leu 1685	1690	1695	5088
cac aca cag ggc cag gac cgc ttt gtt tat acc tgc aat gag tgc aaa His Thr Gln Gly Gln Asp Arg Phe Val Tyr Thr Cys Asn Glu Cys Lys 1700	1705	1710	5136
cac cat gtg gaa aca cgc tgg cac tgc act gtg tgt gag gac tat gac His His Val Glu Thr Arg Trp His Cys Thr Val Cys Glu Asp Tyr Asp 1715	1720	1725	5184
ctt tgt atc aat tgc tac aac aca aag agc cac acc cat aag atg gtg Leu Cys Ile Asn Cys Tyr Asn Thr Lys Ser His Thr His Lys Met Val 1730	1735	1740	5232
aag tgg ggg cta ggc cta gat gat gag ggc agc agt cag ggt gag cca Lys Trp Gly Leu Gly Leu Asp Asp Glu Gly Ser Ser Gln Gly Glu Pro 1745	1750	1755	5280
cag tcc aag agc ccc cag gaa tcc cgg cgt ctc agc atc cag cgc tgc Gln Ser Lys Ser Pro Gln Glu Ser Arg Arg Leu Ser Ile Gln Arg Cys 1765	1770	1775	5328
atc cag tcc ctg gtg cat gcc tgc cag tgt cgc aat gcc aac tgc tca Ile Gln Ser Leu Val His Ala Cys Gln Cys Arg Asn Ala Asn Cys Ser			5376

1780	1785	1790	
9			
ctg ccg tct tgc cag aag atg aag cga gtc gtg cag cac acc aag ggc Leu Pro Ser Cys Gln Lys Met Lys Arg Val Val Gln His Thr Lys Gly 1795	1800	1805	5424
tgc aag cgc aag act aat gga gga tgc cca gtg tgc aag cag ctc att Cys Lys Arg Lys Thr Asn Gly Gly Cys Pro Val Cys Lys Gln Leu Ile 1810	1815	1820	5472
gtt ctt tgc tgc taa cac gcc aaa cac tgc caa gaa aat aaa tgc cct Ala Leu Cys Cys Tyr His Ala Lys His Cys Gln Glu Asn Lys Cys Pro 1825	1830	1835	5520
gtg ccc ttc tgc ctc aac atc aaa cat aac gtc cgc cag cag cag atc Val Pro Phe Cys Leu Asn Ile Lys His Asn Val Arg Gln Gln Ile 1845	1850	1855	5568
cag cac tgc ctg cag cag gct cag ctc atg cgc cgg cga atg gca acc Gln His Cys Leu Gln Ala Gln Leu Met Arg Arg Arg Met Ala Thr 1860	1865	1870	5616
atg aac acc cgc aat gtg cct cag cag agt ttg cct tct cct acc tca Met Asn Thr Arg Asn Val Pro Gln Gln Ser Leu Pro Ser Pro Thr Ser 1875	1880	1885	5664
gca cca ccc ggg act cct aca cag cag ccc agc aca ccc caa aca cca Ala Pro Pro Gly Thr Pro Thr Gln Gln Pro Ser Thr Pro Gln Thr Pro 1890	1895	1900	5712
cag ccc cca gcc cag cct cag cct tca cct gtt aac atg tca cca gca Gln Pro Pro Ala Gln Pro Ser Pro Val Asn Met Ser Pro Ala 1905	1910	1915	5760
ggc ttc cct aat gta gcc cgg act cag ccc cca aca ata gtg tct gct Gly Phe Pro Asn Val Ala Arg Thr Gln Pro Pro Thr Ile Val Ser Ala 1925	1930	1935	5808
ggg aag cct acc aac cag gtg cca gct ccc cca ccc cct gcc cag ccc Gly Lys Pro Thr Asn Gln Val Pro Ala Pro Pro Pro Ala Gln Pro 1940	1945	1950	5856
cca cct gca gca gta gaa gca gcc cgg caa att gaa cgt gag gcc cag Pro Pro Ala Ala Val Glu Ala Ala Arg Gln Ile Glu Arg Glu Ala Gln 1955	1960	1965	5904
cag cag cag cac cta tac cga gca aac atc aac aat ggc atg ccc cca Gln Gln His Leu Tyr Arg Ala Asn Ile Asn Asn Gly Met Pro Pro 1970	1975	1980	5952
gga cgt gac ggt atg ggg acc cca gga agc caa atg act cct gtg ggc Gly Arg Asp Gly Met Gly Thr Pro Gly Ser Gln Met Thr Pro Val Gly 1985	1990	1995	6000
ctg aat gtg ccc cgt ccc aac caa gtc agt ggg oct gtc atg tct agt Leu Asn Val Pro Arg Pro Asn Gln Val Ser Gly Pro Val Met Ser Ser 2005	2010	2015	6048
atg cca cct ggg cag tgg cag cag gca ccc atc cct cag cag cag ccc Met Pro Pro Gly Gln Trp Gln Gln Ala Pro Ile Pro Gln Gln Pro			6096

2020	2025	2030	10
atg cca ggc atg ccc agg cct gta atg tcc atg cag gcc cag gca gca Met Pro Gly Met Pro Arg Pro Val Met Ser Met Gln Ala Gln Ala Ala 2035	2040	2045	6144
gtg gct ggg cca cgg atg ccc aat gtg cag cca aac agg agc atc tcg Val Ala Gly Pro Arg Met Pro Asn Val Gln Pro Asn Arg Ser Ile Ser 2050	2055	2060	6192
cca agt gcc ctg caa gac ctg cta cgg acc cta aag tca ccc agc tot Pro Ser Ala Leu Gln Asp Leu Leu Arg Thr Leu Lys Ser Pro Ser Ser 2065	2070	2075	6240
cct cag cag cag cag gtg ctg aac atc ctt aaa tca aac cca cag Pro Gln Gln Gln Val Leu Asn Ile Leu Lys Ser Asn Pro Gln 2085	2090	2095	6288
cta atg gca gct ttc atc aaa cag cgc aca gcc aag tat gtg gcc aat Leu Met Ala Ala Phe Ile Lys Gln Arg Thr Ala Lys Tyr Val Ala Asn 2100	2105	2110	6336
cag cct ggc atg ccc cag ccc gga ctt caa tcc cag cct ggt atg Gln Pro Gly Met Gln Pro Gln Pro Gly Leu Gln Ser Gln Pro Gly Met 2115	2120	2125	6384
cag ccc cag cct ggc atg cac cag cag cct agt ttg caa aac ctg aac Gln Pro Gln Pro Gly Met His Gln Gln Pro Ser Leu Gln Asn Leu Asn 2130	2135	2140	6432
gca atg caa gct ggt gtg cca cgg cct ggt gtg cct cca cca caa cca Ala Met Gln Ala Gly Val Pro Arg Pro Gly Val Pro Pro Pro Gln Pro 2145	2150	2155	6480
gca atg gga ggc ctg aat ccc cag gga caa gct ctg aac atc atg aac Ala Met Gly Gly Leu Asn Pro Gln Gly Gln Ala Leu Asn Ile Met Asn 2165	2170	2175	6528
cca gga cac aac ccc aac atg aca aac atg aat cca cag tac cga gaa Pro Gly His Asn Pro Asn Met Thr Asn Met Asn Pro Gln Tyr Arg Glu 2180	2185	2190	6576
atg gtg agg aga cag ctg cta cag cac cag cag cag cag caa cag Met Val Arg Arg Gln Leu Leu Gln His Gln Gln Gln Gln Gln 2195	2200	2205	6624
cag cag cag cag caa caa aat agt gcc agc ttg gcc ggg ggc Gln Gln Gln Gln Gln Gln Asn Ser Ala Ser Leu Ala Gly Gly 2210	2215	2220	6672
atg gcg gga cac agc cag ttc cag cag cca caa gga cct gga ggt tat Met Ala Gly His Ser Gln Phe Gln Gln Pro Gln Gly Pro Gly Gly Tyr 2225	2230	2235	6720
gcc cca gcc atg cag cag caa cgc atg caa cag cac ctc ccc atc cag Ala Pro Ala Met Gln Gln Gln Arg Met Gln Gln His Leu Pro Ile Gln 2245	2250	2255	6768
ggc agc tcc atg ggc cag atg gct gct cca atg gga caa ott ggc cag Gly Ser Ser Met Gly Gln Met Ala Ala Pro Met Gly Gln Leu Gly Gln			6816

	11		
2260	2265	2270	
atg ggg cag cct ggg cta ggg gca gac agc acc cct aat atc cag cag Met Gly Gln Pro Gly Leu Gly Ala Asp Ser Thr Pro Asn Ile Gln Gln 2275	2280	2285	6864
gcc ctg cag caa cgg att ctg cag cag cag atg aag caa caa att Ala Leu Gln Gln Arg Ile Leu Gln Gln Gln Met Lys Gln Gln Ile 2290	2295	2300	6912
ggg tca cca ggc cag ccg aac ccc atg agc ccc cag cag cac atg ctc Gly Ser Pro Gly Gln Pro Asn Pro Met Ser Pro Gln Gln His Met Leu 2305	2310	2315	6960
tca gga cag cca cag gcc tca cat ctc cct ggc cag cag atc gcc aca Ser Gly Gln Pro Gln Ala Ser His Leu Pro Gly Gln Gln Ile Ala Thr 2325	2330	2335	7008
tcc ctt agt aac cag gtg cga tct cca gcc cct gtg cag tct cca cgg Ser Leu Ser Asn Gln Val Arg Ser Pro Ala Pro Val Gln Ser Pro Arg 2340	2345	2350	7056
ccc daa tcc caa cct cca cat tcc agc ccg tca cca cgg ata caa ccc Pro Gln Ser Gln Pro Pro His Ser Ser Pro Ser Pro Arg Ile Gln Pro 2355	2360	2365	7104
cag cct tca cca cac cat gtt tca ccc cag act gga acc cct cac cct Gln Pro Ser Pro His His Val Ser Pro Gln Thr Gly Thr Pro His Pro. 2370	2375	2380	7152
gga ctc gca gtc acc atg gcc agc tcc atg gat cag gga cac ctg ggg Gly Leu Ala Val Thr Met Ala Ser Ser Met Asp Gln Gly His Leu Gly 2385	2390	2395	7200
aac cct gaa cag agt gca atg ctc ccc cag ctg aat acc ccc aac agg Asn Pro Glu Gln Ser Ala Met Leu Pro Gln Leu Asn Thr Pro Asn Arg 2405	2410	2415	7248
agc gca ctg tcc agt gaa ctg tcc ctg gtt ggt gat acc acc gga gac Ser Ala Leu Ser Ser Glu Leu Ser Leu Val Gly Asp Thr Gly Asp 2420	2425	2430	7296
aca cta gaa aag ttt gtg gag ggt ttg tag Thr Leu Glu Lys Phe Val Glu Gly Leu *	2435	2440	7326
<pre> <210> 2 <211> 2441 <212> PRT <213> Mus </pre>			
<pre> <220> <221> VARIANT <222> (1)...(2441) <223> Xaa = Any Amino Acid </pre>			
<pre> <400> 2 Met Ala Glu Asn Leu Leu Asp Gly Pro Pro Asn Pro Lys Arg Ala Lys 1 5 10 15 </pre>			

12

Leu Ser Ser Pro Gly Phe Ser Ala Asn Asp Asn Thr Asp Phe Gly Ser
 20 25 30
 Leu Phe Asp Leu Glu Asn Asp Leu Pro Asp Glu Leu Ile Pro Asn Gly
 35 40 45
 Glu Leu Ser Leu Leu Asn Ser Gly Asn Leu Val Pro Asp Ala Ala Ser
 50 55 60
 Lys His Lys Gln Leu Ser Glu Leu Leu Arg Gly Gly Ser Gly Ser Ser
 65 70 75 80
 Ile Asn Pro Gly Ile Gly Asn Val Ser Ala Ser Ser Pro Val Gln Gln
 85 90 95
 Gly Leu Gly Gly Gln Ala Gln Gly Gln Pro Asn Ser Thr Asn Met Ala
 100 105 110
 Ser Leu Gly Ala Met Gly Lys Ser Pro Leu Asn Gln Gly Asp Ser Ser
 115 120 125
 Thr Pro Asn Leu Pro Lys Gln Ala Ala Ser Thr Ser Gly Pro Thr Pro
 130 135 140
 Pro Ala Ser Gln Ala Leu Asn Pro Gln Ala Gln Lys Gln Val Gly Leu
 145 150 155 160
 Val Thr Ser Ser Pro Ala Thr Ser Gln Thr Gly Pro Gly Ile Cys Met
 165 170 175
 Asn Ala Asn Phe Asn Gln Thr His Pro Gly Leu Leu Asn Ser Asn Ser
 180 185 190
 Gly His Ser Leu Met Asn Gln Ala Gln Gln Gly Gln Ala Gln Val Met
 195 200 205
 Asn Gly Ser Leu Gly Ala Ala Gly Arg Gly Arg Gly Ala Gly Met Pro
 210 215 220
 Tyr Pro Ala Pro Ala Met Gln Gly Ala Thr Ser Ser Val Leu Ala Glu
 225 230 235 240
 Thr Leu Thr Gln Val Ser Pro Gln Met Ala Gly His Ala Gly Leu Asn
 245 250 255
 Thr Ala Gln Ala Gly Gly Met Thr Lys Met Gly Met Thr Gly Thr Thr
 260 265 270
 Ser Pro Phe Gly Gln Pro Phe Ser Gln Thr Gly Gly Gln Gln Met Gly
 275 280 285
 Ala Thr Gly Val Asn Pro Gln Leu Ala Ser Lys Gln Ser Met Val Asn
 290 295 300
 Ser Leu Pro Ala Phe Pro Thr Asp Ile Lys Asn Thr Ser Val Thr Thr
 305 310 315 320
 Val Pro Asn Met Ser Gln Leu Gln Thr Ser Val Gly Ile Val Pro Thr
 325 330 335
 Gln Ala Ile Ala Thr Gly Pro Thr Ala Asp Pro Glu Lys Arg Lys Leu
 340 345 350
 Ile Gln Gln Leu Val Leu Leu His Ala His Lys Cys Gln Arg
 355 360 365
 Arg Glu Gln Ala Asn Gly Glu Val Xaa Ala Cys Ser Leu Pro His Cys
 370 375 380
 Arg Thr Met Lys Asn Val Leu Asn His Met Thr His Cys Gln Ala Pro
 385 390 395 400
 Lys Ala Cys Gln Val Ala His Cys Ala Ser Ser Arg Gln Ile Ile Ser
 405 410 415
 His Trp Lys Asn Cys Thr Arg His Asp Cys Pro Val Cys Leu Pro Leu
 420 425 430
 Lys Asn Ala Ser Asp Lys Arg Asn Gln Gln Thr Ile Leu Gly Ser Pro
 435 440 445
 Ala Ser Gly Ile Gln Asn Thr Ile Gly Ser Val Gly Ala Gly Gln Gln
 450 455 460
 Asn Ala Thr Ser Leu Ser Asn Pro Asn Pro Ile Asp Pro Ser Ser Met
 465 470 475 480
 Gln Arg Ala Tyr Ala Ala Leu Gly Leu Pro Tyr Met Asn Gln Pro Gln
 485 490 495

Thr Gln Leu Gln Pro Gln Val Pro Gly Gln Gln Pro Ala Gln Pro Pro
 500 505 510
 Ala His Gln Gln Met Arg Thr Leu Asn Ala Leu Gly Asn Asn Pro Met
 515 520 525
 Ser Val Pro Ala Gly Gly Ile Thr Thr Asp Gln Gln Pro Pro Asn Leu
 530 535 540
 Ile Ser Glu Ser Ala Leu Pro Thr Ser Leu Gly Ala Thr Asn Pro Leu
 545 550 555 560
 Met Asn Asp Gly Ser Asn Ser Gly Asn Ile Gly Ser Leu Ser Thr Ile
 565 570 575
 Pro Thr Ala Ala Pro Pro Ser Ser Thr Gly Val Arg Lys Gly Trp His
 580 585 590
 Glu His Val Thr Gln Asp Leu Arg Ser His Leu Val His Lys Leu Val.
 595 600 605
 Gln Ala Ile Phe Pro Thr Pro Asp Pro Ala Ala Leu Lys Asp Arg Arg
 610 615 620
 Met Glu Asn Leu Val Ala Tyr Ala Lys Lys Val Glu Gly Asp Met Tyr
 625 630 635 640
 Glu Ser Ala Asn Ser Arg Asp Glu Tyr Tyr His Leu Leu Ala Glu Lys
 645 650 655
 Ile Tyr Lys Ile Gln Lys Glu Leu Glu Glu Lys Arg Arg Thr Arg Leu
 660 665 670
 His Lys Gln Gly Ile Leu Gly Asn Gln Pro Ala Leu Pro Ala Ser Gly
 675 680 685
 Ala Gln Pro Pro Val Ile Pro Pro Ala Gln Ser Val Arg Pro Pro Asn
 690 695 700
 Gly Pro Leu Pro Leu Pro Val Asn Arg Met Gln Val Ser Gln Gly Met
 705 710 715 720
 Asn Ser Phe Asn Pro Met Ser Leu Gly Asn Val Gln Leu Pro Gln Ala
 725 730 735
 Pro Met Gly Pro Arg Ala Ala Ser Pro Met Asn His Ser Val Gln Met
 740 745 750
 Asn Ser Met Ala Ser Val Pro Gly Met Ala Ile Ser Pro Ser Arg Met
 755 760 765
 Pro Gln Pro Pro Asn Met Met Gly Thr His Ala Asn Asn Ile Met Ala
 770 775 780
 Gln Ala Pro Thr Gln Asn Gln Phe Leu Pro Gln Asn Gln Phe Pro Ser
 785 790 795 800
 Ser Ser Gly Ala Met Ser Val Asn Ser Val Gly Met Gly Gln Pro Ala
 805 810 815
 Ala Gln Ala Gly Val Ser Gln Gly Gln Glu Pro Gly Ala Ala Leu Pro
 820 825 830
 Asn Pro Leu Asn Met Leu Ala Pro Gln Ala Ser Gln Leu Pro Cys Pro
 835 840 845
 Pro Val Thr Gln Ser Pro Leu His Pro Thr Pro Pro Pro Ala Ser Thr
 850 855 860
 Ala Ala Gly Met Pro Ser Leu Gln His Pro Thr Ala Pro Gly Met Thr
 865 870 875 880
 Pro Pro Gln Pro Ala Ala Pro Thr Gln Pro Ser Thr Pro Val Ser Ser
 885 890 895
 Gly Gln Thr Pro Thr Pro Thr Pro Gly Ser Val Pro Ser Ala Ala Gln
 900 905 910
 Thr Gln Ser Thr Pro Thr Val Gln Ala Ala Ala Gln Ala Gln Val Thr
 915 920 925
 Pro Gln Pro Gln Thr Pro Val Gln Pro Pro Ser Val Ala Thr Pro Gln
 930 935 940
 Ser Ser Gln Gln Gln Pro Thr Pro Val His Thr Gln Pro Pro Gly Thr
 945 950 955 960
 Pro Leu Ser Gln Ala Ala Ala Ser Ile Asp Asn Arg Val Pro Thr Pro
 965 970 975

14

Ser Thr Val Thr Ser Ala Glu Thr Ser Ser Gln Gln Pro Gly Pro Asp
 980 985 990
 Val Pro Met Leu Glu Met Lys Thr Glu Val Gln Thr Asp Asp Ala Glu
 995 1000 1005
 Pro Glu Pro Thr Glu Ser Lys Gly Glu Pro Arg Ser Glu Met Met Glu
 1010 1015 1020
 Glu Asp Leu Gln Gly Ser Ser Gln Val Lys Glu Glu Thr Asp Thr Thr
 1025 1030 1035 1040
 Glu Gln Lys Ser Glu Pro Met Glu Val Glu Glu Lys Lys Pro Glu Val
 1045 1050 1055
 Lys Val Glu Ala Lys Glu Glu Glu Asn Ser Ser Asn Asp Thr Ala
 1060 1065 1070
 Ser Gln Ser Thr Ser Pro Ser Gln Pro Arg Lys Lys Ile Phe Lys Pro,
 1075 1080 1085
 Glu Glu Leu Arg Gln Ala Leu Met Pro Thr Leu Glu Ala Leu Tyr Arg
 1090 1095 1100
 Gln Asp Pro Glu Ser Leu Pro Phe Arg Gln Pro Val Asp Pro Gln Leu
 1105 1110 1115 1120
 Leu Gly Ile Pro Asp Tyr Phe Asp Ile Val Lys Asn Pro Met Asp Leu
 1125 1130 1135
 Ser Thr Ile Lys Arg Lys Leu Asp Thr Gly Gln Tyr Gln Glu Pro Trp
 1140 1145 1150
 Gln Tyr Val Asp Asp Val Arg Leu Met Phe Asn Asn Ala Trp Leu Tyr
 1155 1160 1165
 Asn Arg Lys Thr Ser Arg Val Tyr Lys Phe Cys Ser Lys Leu Ala Glu
 1170 1175 1180
 Val Phe Glu Gln Glu Ile Asp Pro Val Met Gln Ser Leu Gly Tyr Cys
 1185 1190 1195 1200
 Cys Gly Arg Lys Tyr Glu Phe Ser Pro Gln Thr Leu Cys Cys Tyr Gly
 1205 1210 1215
 Lys Gln Leu Cys Thr Ile Pro Arg Asp Ala Ala Tyr Tyr Ser Tyr Gln
 1220 1225 1230
 Asn Arg Tyr His Phe Cys Gly Lys Cys Phe Thr Glu Ile Gln Gly Glu
 1235 1240 1245
 Asn Val Thr Leu Gly Asp Asp Pro Ser Gln Pro Gln Thr Thr Ile Ser
 1250 1255 1260
 Lys Asp Gln Phe Glu Lys Lys Asn Asp Thr Leu Asp Pro Glu Pro
 1265 1270 1275 1280
 Phe Val Asp Cys Lys Glu Cys Gly Arg Lys Met His Gln Ile Cys Val
 1285 1290 1295
 Leu His Tyr Asp Ile Ile Trp Pro Ser Gly Phe Val Cys Asp Asn Cys
 1300 1305 1310
 Leu Lys Lys Thr Gly Arg Pro Arg Lys Glu Asn Lys Phe Ser Ala Lys
 1315 1320 1325
 Arg Leu Gln Thr Thr Arg Leu Gly Asn His Leu Glu Asp Arg Val Asn
 1330 1335 1340
 Lys Phe Leu Arg Arg Gln Asn His Pro Glu Ala Gly Glu Val Phe Val
 1345 1350 1355 1360
 Arg Val Val Ala Ser Ser Asp Lys Thr Val Glu Val Lys Pro Gly Met
 1365 1370 1375
 Lys Ser Arg Phe Val Asp Ser Gly Glu Met Ser Glu Ser Phe Pro Tyr
 1380 1385 1390
 Arg Thr Lys Ala Leu Phe Ala Phe Glu Glu Ile Asp Gly Val Asp Val
 1395 1400 1405
 Cys Phe Phe Gly Met His Val Gln Asp Thr Ala Leu Ile Ala Pro His
 1410 1415 1420
 Gln Ile Gln Gly Cys Val Tyr Ile Ser Tyr Leu Asp Ser Ile His Phe
 1425 1430 1435 1440
 Phe Arg Pro Arg Cys Leu Arg Thr Ala Val Tyr His Glu Ile Leu Ile
 1445 1450 1455

15

Gly Tyr Leu Glu Tyr Val Lys Lys Leu Val Tyr Val Thr Ala His Ile
 1450 1465 1470
 Trp Ala Cys Pro Pro Ser Glu Gly Asp Asp Tyr Ile Phe His Cys His
 1475 1480 1485
 Pro Pro Asp Gln Lys Ile Pro Lys Pro Lys Arg Leu Gln Glu Trp Tyr
 1490 1495 1500
 Lys Lys Met Leu Asp Lys Ala Phe Ala Glu Arg Ile Ile Asn Asp Tyr
 1505 1510 1515 1520
 Lys Asp Ile Phe Lys Gln Ala Asn Glu Asp Arg Leu Thr Ser Ala Lys
 1525 1530 1535
 Glu Leu Pro Tyr Phe Glu Gly Asp Phe Trp Pro Asn Val Leu Glu Glu
 1540 1545 1550
 Ser Ile Lys Glu Leu Glu Gln Glu Glu Glu Arg Lys Lys Glu Glu,
 1555 1560 1565
 Ser Thr Ala Ala Ser Glu Thr Pro Glu Gly Ser Gln Gly Asp Ser Lys
 1570 1575 1580
 Asn Ala Lys Lys Asn Asn Lys Lys Thr Asn Lys Asn Lys Ser Ser
 1585 1590 1595 1600
 Ile Ser Arg Ala Asn Lys Lys Pro Ser Met Pro Asn Val Ser Asn
 1605 1610 1615
 Asp Leu Ser Gln Lys Leu Tyr Ala Thr Met Glu Lys His Lys Glu Val
 1620 1625 1630
 Phe Phe Val Ile His Leu His Ala Gly Pro Val Ile Ser Thr Gln Pro
 1635 1640 1645
 Pro Ile Val Asp Pro Asp Pro Leu Leu Ser Cys Asp Leu Met Asp Gly
 1650 1655 1660
 Arg Asp Ala Phe Leu Thr Leu Ala Arg Asp Lys His Trp Glu Phe Ser
 1665 1670 1675 1680
 Ser Leu Arg Arg Ser Lys Trp Ser Thr Leu Cys Met Leu Val Glu Leu
 1685 1690 1695
 His Thr Gln Gly Gln Asp Arg Phe Val Tyr Thr Cys Asn Glu Cys Lys
 1700 1705 1710
 His His Val Glu Thr Arg Trp His Cys Thr Val Cys Glu Asp Tyr Asp
 1715 1720 1725
 Leu Cys Ile Asn Cys Tyr Asn Thr Lys Ser His Thr His Lys Met Val
 1730 1735 1740
 Lys Trp Gly Leu Gly Leu Asp Asp Glu Gly Ser Ser Gln Gly Glu Pro
 1745 1750 1755 1760
 Gln Ser Lys Ser Pro Gln Glu Ser Arg Arg Leu Ser Ile Gln Arg Cys
 1765 1770 1775
 Ile Gln Ser Leu Val His Ala Cys Gln Cys Arg Asn Ala Asn Cys Ser
 1780 1785 1790
 Leu Pro Ser Cys Gln Lys Met Lys Arg Val Val Gln His Thr Lys Gly
 1795 1800 1805
 Cys Lys Arg Lys Thr Asn Gly Gly Cys Pro Val Cys Lys Gln Leu Ile
 1810 1815 1820
 Ala Leu Cys Cys Tyr His Ala Lys His Cys Gln Glu Asn Lys Cys Pro
 1825 1830 1835 1840
 Val Pro Phe Cys Leu Asn Ile Lys His Asn Val Arg Gln Gln Ile
 1845 1850 1855
 Gln His Cys Leu Gln Gln Ala Gln Leu Met Arg Arg Arg Met Ala Thr
 1860 1865 1870
 Met Asn Thr Arg Asn Val Pro Gln Gln Ser Leu Pro Ser Pro Thr Ser
 1875 1880 1885
 Ala Pro Pro Gly Thr Pro Thr Gln Gln Pro Ser Thr Pro Gln Thr Pro
 1890 1895 1900
 Gln Pro Pro Ala Gln Pro Gln Pro Ser Pro Val Asn Met Ser Pro Ala
 1905 1910 1915 1920
 Gly Phe Pro Asn Val Ala Arg Thr Gln Pro Pro Thr Ile Val Ser Ala
 1925 1930 1935

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Gly Lys Pro Thr Asn Gln Val Pro Ala Pro Pro Pro Pro Ala Gln Pro
 1940 1945 1950
 Pro Pro Ala Ala Val Glu Ala Ala Arg Gln Ile Glu Arg Glu Ala Gln
 1955 1960 1965
 Gln Gln Gln His Leu Tyr Arg Ala Asn Ile Asn Asn Gly Met Pro Pro
 1970 1975 1980
 Gly Arg Asp Gly Met Gly Thr Pro Gly Ser Gln Met Thr Pro Val Gly
 1985 1990 1995 2000
 Leu Asn Val Pro Arg Pro Asn Gln Val Ser Gly Pro Val Met Ser Ser
 2005 2010 2015
 Met Pro Pro Gly Gln Trp Gln Gln Ala Pro Ile Pro Gln Gln Gln Pro
 2020 2025 2030
 Met Pro Gly Met Pro Arg Pro Val Met Ser Met Gln Ala Gln Ala Ala
 2035 2040 2045
 Val Ala Gly Pro Arg Met Pro Asn Val Gln Pro Asn Arg Ser Ile Ser
 2050 2055 2060
 Pro Ser Ala Leu Gln Asp Leu Leu Arg Thr Leu Lys Ser Pro Ser Ser
 2065 2070 2075 2080
 Pro Gln Gln Gln Gln Val Leu Asn Ile Leu Lys Ser Asn Pro Gln
 2085 2090 2095
 Leu Met Ala Ala Phe Ile Lys Gln Arg Thr Ala Lys Tyr Val Ala Asn
 2100 2105 2110
 Gln Pro Gly Met Gln Pro Gln Pro Gly Leu Gln Ser Gln Pro Gly Met
 2115 2120 2125
 Gln Pro Gln Pro Gly Met His Gln Gln Pro Ser Leu Gln Asn Leu Asn
 2130 2135 2140
 Ala Met Gln Ala Gly Val Pro Arg Pro Gly Val Pro Pro Pro Gln Pro
 2145 2150 2155 2160
 Ala Met Gly Gly Leu Asn Pro Gln Gly Gln Ala Leu Asn Ile Met Asn
 2165 2170 2175
 Pro Gly His Asn Pro Asn Met Thr Asn Met Asn Pro Gln Tyr Arg Glu
 2180 2185 2190
 Met Val Arg Arg Gln Leu Leu Gln His Gln Gln Gln Gln Gln Gln
 2195 2200 2205
 Gln Gln Gln Gln Gln Gln Asn Ser Ala Ser Leu Ala Gly Gly
 2210 2215 2220
 Met Ala Gly His Ser Gln Phe Gln Gln Pro Gln Gly Pro Gly Gly Tyr
 2225 2230 2235 2240
 Ala Pro Ala Met Gln Gln Arg Met Gln Gln His Leu Pro Ile Gln
 2245 2250 2255
 Gly Ser Ser Met Gly Gln Met Ala Ala Pro Met Gly Gln Leu Gly Gln
 2260 2265 2270
 Met Gly Gln Pro Gly Leu Gly Ala Asp Ser Thr Pro Asn Ile Gln Gln
 2275 2280 2285
 Ala Leu Gln Gln Arg Ile Leu Gln Gln Gln Met Lys Gln Gln Ile
 2290 2295 2300
 Gly Ser Pro Gly Gln Pro Asn Pro Met Ser Pro Gln Gln His Met Leu
 2305 2310 2315 2320
 Ser Gly Gln Pro Gln Ala Ser His Leu Pro Gly Gln Gln Ile Ala Thr
 2325 2330 2335
 Ser Leu Ser Asn Gln Val Arg Ser Pro Ala Pro Val Gln Ser Pro Arg
 2340 2345 2350
 Pro Gln Ser Gln Pro Pro His Ser Ser Pro Ser Pro Arg Ile Gln Pro
 2355 2360 2365
 Gln Pro Ser Pro His His Val Ser Pro Gln Thr Gly Thr Pro His Pro
 2370 2375 2380
 Gly Leu Ala Val Thr Met Ala Ser Ser Met Asp Gln Gly His Leu Gly
 2385 2390 2395 2400
 Asn Pro Glu Gln Ser Ala Met Leu Pro Gln Leu Asn Thr Pro Asn Arg
 2405 2410 2415

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Ser Ala Leu Ser Ser Glu Leu Ser Leu Val Gly Asp Thr Thr Gly Asp
2420 2425 2430
Thr Leu Glu Lys Phe Val Glu Gly Leu
2435 2440

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<212> PRT
<213> Mus

<400> 3
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1 5 10 15

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<211> 17
<212> DNA
<213> *Saccharomyces cerevisiae*

<400> 4
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17